

**CAPACITIVE COUPLERS AND METHODS FOR
COMMUNICATING DATA OVER AN ELECTRICAL POWER DELIVERY SYSTEM**

ABSTRACT

Capacitive couplers and methods for communicating data over an electrical power delivery system are disclosed. A device for coupling a signal onto a conductor of an electrical power delivery system includes a conductive member having a length of at least six inches but less than 200 feet and a data signal generator connected to the conductive member for supplying a data signal to the conductive member. The conductive member is adapted to capacitively couple the data signal onto the conductor. The conductive member may comprise an outer layer of a coaxial cable wherein an inner conductor of the coaxial cable is adapted to be connected to the conductor of the electrical power delivery system. The conductor may comprise a grounding wire of a surge arrester wherein the conductive member comprises a conductive medium adapted to be wrapped around the grounding wire. A method of installing a device for capacitively coupling a signal onto a conductor of an electrical power delivery system is also disclosed. The method includes selecting a conductive member having a length of at least six inches but less than 200 feet and providing a data signal generator to supply a data signal to the conductive member. The conductive member is then positioned to capacitively couple the data signal onto the conductor. Other couplers and methods are also disclosed.